

End-to-End Testing for Collection 004

Land Reprocessing

- The GDAAC-MODAPS-EDC/NSDIC data flow has been extensively tested
 - GDAAC production
 - The GDAAC has averaged 3x production for Collection 004 over 150 days over the period dataday 054-360, 2000
 - The GDAAC will add an additional 1x on 3/1/03
 - MODAPS production
 - Five 16-day production tests have been run on mtvs2 for performance measurement and training
 - Four of these tests include the suite of land Collection 004 PGEs
 - Measured x-rates were 4.3+ with land and atmospheres and 4.8+ with land only. Demonstrated x-rate with 10% downtime allowance is 4
 - MODAPS presently has 112 datadays of L1B (etc) on disk and can reprocess at an x-rate of >4x from December 22, 2002 forward

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Land Reprocessing (cont)

- EDC/NSIDC Ingest Testing
 - NSIDC
 - Current daily export is 12GB/x compared to baseline of 40GB/x
 - NSIDC demonstrated that it can ingest at 6x (4x reprocessing and 1x forward for each of Terra and Aqua) with considerable ease including periods of downtime for holidays and weekends
 - EDC
 - Current daily export volume of 330GB/x for Terra and 175GB/x for Aqua, i.e 6x forward- and re-processing, exports 1.82TB/production day to EDC. The current EDC baseline before the SWGD CCR is 1.38TB/production day
 - Two ingest tests were conducted with MODAPS and EDC using 16-dataday periods and EDC conducted three additional tests using 2TB data blocks after EDC tuning was performed
 - Results indicated that EDC could ingest at 1.8TB/production day but with no allowance for downtime

Collection 004 Land Reprocessing

- Data Production
 - Reprocessing interval will be February 24, 2000 (dataday 55) through December 18, 2002 (dataday 352 which is the end of a 32-day period)
 - Data will be reprocessed in time order
 - Data will be reprocessed at approximately 3.5x to allow for a 10% downtime at EDC. Export rate to EDC will be 1.64TB/production day including reprocessing and forward processing
 - With GDAAC export to MODAPS at 4x for reprocessing, L1B etc. data will accumulate on MODAPS disk. This storage space is limited to 120 datadays and it will be necessary to stop ingest from the GDAAC periodically
- Schedule
 - Start date subject to outcome of this meeting will be December 22, 2002
 - Estimated completion date with 3.5x reprocessing will be September 26, 2003
 - Caveats: testing has not been done to determine impact of Aqua reprocessing or Oceans reprocessing on performance of end-to-end system and either of these could extend the schedule.

Remaining MODAPS items

- Install fiber optic cables to connect MODAPS production servers to GES DAAC firewall - needed for 6X forward-and re-processing
- L5 loaders need to be modified to reduce I/O traffic to Linux minions from SGI production servers - needed to sustain production at >6X for catch-up situations